UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,698	01/15/2004	Richard R. Rabbat	073338.0150 (03-52019 FLA	8438

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EXAMINER
CHRISS, ANDREW W

ART UNIT	PAPER NUMBER
2619	

NOTIFICATION DATE	DELIVERY MODE
07/23/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)	
Office Action Summary	10/759,698	RABBAT ET AL.	
	Examiner	Art Unit	
	Andrew Chriss	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 March 2008</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-33</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-12 and 16-33</u> is/are rejected.

7)☒ Claim(s) <u>13-15</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>15 January 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   In view of the pre-brief conference request filed on April 2, 2008, PROSECUTION IS

HEREBY REOPENED. A new grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following

two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37

CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an

appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee

can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have

been increased since they were previously paid, then appellant must pay the difference between

the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing

below:

/CHAU T. NGUYEN/

Supervisory Patent Examiner, Art Unit 2619.

Claim Objections

2.   **Claims 2, 5, 6, 13, 16, 17, 24, 27, and 28** objected to because of the following

informalities:

Regarding Claims 2, 13, and 24, claim language "recovery response times" should read "response times" in order to be consistent with the terminology found in Applicant's specification.

Regarding Claims 5, 6, 16, 17, 27, and 28, claim language "failure obligation" should read "remote node obligation" or "protection obligation" in order to be consistent with the terminology found in Applicant's specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

   Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claims 1-11** rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed method for provisioning protection paths is not tied to another statutory class (such as a particular apparatus) nor transforming underlying subject matter (such as an article or materials) to a different state or thing. To qualify as a § 101 statutory process, the claim should positively recite the other statutory class (e.g., the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

4.   **Claims 6, 17, and 28** rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. There is a lack of antecedent basis for "the failure obligations" in the

claim language, as the rejected claims depend on independent claims 1, 12, and 23 and not on

Claims 5, 16, and 27, which also recite claim language "failure obligations."

5.   **Claims 23-33** rejected under 35 U.S.C. 112, second paragraph, as being incomplete for

omitting essential structural cooperative relationships of elements, such omission amounting to a

gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural

cooperative relationships are between the claimed network interface, memory, and controller in

independent Claim 23. Claims 24-33 depend on Claim 23, and fail to resolve the deficiencies

therein.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

6.   **Claims 1, 5, 6, 8, and 11** rejected under 35 U.S.C. 102(b) as being anticipated by

Kinoshita et al (United States Patent Application Publication 2002/0172149 A1), hereinafter

Kinoshita.

Regarding Claim 1, Kinoshita discloses:

- determining network configuration information via a path setup request message for a network formed by a plurality of nodes (paragraph 0067);

- identifying a working path from a source node to a destination node based on information returned via a path setup response message spanning one or more intermediate nodes, wherein the source node, the destination node, and the intermediate nodes are all nodes in the network (Figure 3; paragraphs 0068-0070);

- determining a delay requirement (timing constraint) for failure recovery (paragraph 0075);

- identifying potential nodes in the network that satisfy the timing constraint based on the network configuration information, wherein each node may add its own identifier to the path setup response message (paragraph 0074);

- selecting a protection path from the source node to the destination node spanning a second set of one or more intermediate nodes, the second intermediate nodes selected from the potential nodes (Figures 9-11; paragraph 0075); and

- setting up the protection path (Figures 9-11; paragraph 0075).

Regarding Claims 5 and 6, Kinoshita discloses maintaining obligation information specifying a plurality of failure obligations, each failure obligation indicating, with respect to one of the nodes in the network, obligations of other ones of the nodes in the network given a failure of the one node and identifying the potential nodes in the network that satisfy the timing constraint further comprises identifying the potential nodes in the network that satisfy the timing constraint and the failure obligations, wherein each node determines a protection path route by

setting itself as a start-point node and determines routes for restoring node failures at adjacent

nodes (paragraph 0068).

Regarding Claim 8, Kinoshita discloses determining the timing constraint comprising

receiving a configured value for the working path, wherein a protection path is set up in order to

satisfy the same QoS requirements as a corresponding working path (paragraph 0010).

Regarding Claim 11, identifying the potential nodes that satisfy the timing constraint

comprises determining selected ones of the nodes in the network that satisfy the timing constraint

based upon a failure reported from any one of the source node, the destination node, and the

intermediate nodes, wherein route calculation for a protection path is performed in order to

bypass a node that has failed (paragraph 0120).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness
      or nonobviousness.

8.   **Claim 7** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita in view of

Jaber et al (United States Patent Application Publication US 2002/0006112 A1), hereinafter

Jaber. Kinoshita discloses all of the limitations of Claim 1, as described above. However,

Kinoshita may not disclose identifying a class of service associated with the working path and

selecting the timing constraint based upon the class of service. In the same field of endeavor,

Jaber teaches class of service capabilities in a transport network, implemented in priority levels

(e.g., guaranteed, best effort). Each priority level has a timing constraint associated with it (e.g.,

guaranteed traffic has a defined time delay). Therefore, Jaber teaches identifying a class of

service for a working path in a transport network, and selecting a timing constraint based upon

the class of service (paragraph 0030). It would have been obvious to a person of ordinary skill in

the art at the time the invention was made to combine the class of service designation taught in

Jaber with the working/protection path provisioning disclosed in Kinoshita in order to send

opaque link state advertisements across the network, thus supporting path selection.

9.   **Claims 9, 12, 16, 17, 19, 20, 22, 23, 27, 28, 30, 31, and 33** rejected under 35 U.S.C.

103(a) as being unpatentable over Kinoshita in view of Chen et al (United States Patent

7,170,851), hereinafter Chen.

     Regarding Claim 9, Kinoshita discloses all of the limitations of Claim 1, as described

above. Kinoshita further discloses a mesh topology (Figure 1). However, Kinoshita may not

disclose each of the nodes in the network comprising an optical network node. In the same field

of endeavor, Chen discloses provisioning working and protection paths in a SONET network

(Figures 7 and 8; column 9, lines 40-53). It would have been obvious to one of ordinary skill in

the art at the time the invention was made to combine the optical nodes disclosed in Chen with the working/protection path provisioning disclosed in Kinoshita in order to automatically provision facility fault protection mechanisms in SONET networks.

Regarding Claim 12, Kinoshita discloses determining network configuration information for a network formed by a plurality of nodes; identifying a working path from a source node to a destination node spanning one or more intermediate nodes, wherein the source node, the destination node, and the intermediate nodes are all nodes in the network; determining a timing constraint for failure recovery; identifying potential nodes in the network that satisfy the timing constraint based on the network configuration information; selecting a protection path from the source node to the destination node spanning a second set of one or more intermediate nodes, the second intermediate nodes selected from the potential nodes; and setting up the protection path, as described with regards to Claim 1 above. Further, Kinoshita discloses a network interface (paragraph 0081; Figure 19) and a controller operable to perform the method steps of Claim 1 above (paragraph 0081; Figure 19, 54). However, Kinoshita may not explicitly disclose a computer readable medium storing logic or a memory maintaining network configuration information. In the same field of endeavor, Chen discloses a computer readable media storing program code, as well as a system memory (column 10, line 61 – column 11, line 27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the memory disclosed in Chen with the working/protection path provisioning disclosed in Kinoshita in order to automatically provision facility fault protection mechanisms in SONET networks.

Claims 16 and 27 comprise substantially the same limitations as Claim 5, which are disclosed by Kinoshita as described above.

Claims 17 and 28 comprise substantially the same limitations as Claim 6, which are disclosed by Kinoshita as described above.

Claims 19 and 30 comprise substantially the same limitations as Claim 8, which are disclosed by Kinoshita as described above.

Claims 20 and 31 comprise substantially the same limitations as Claim 9, which are disclosed by the combination of Kinoshita and Chen, as described above.

Claims 22 and 33 comprise substantially the same limitations as Claim 11, which are disclosed by Kinoshita as described above.

10.   **Claim 10** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita in view of Humblet et al (United States Patent 6,992,978), hereinafter Humblet. Kinoshita discloses all of the limitations of Claim 1, as described above. Kinoshita further discloses identifying a fault condition at a reporting one of the nodes in the network and generating a fault message identifying the fault condition (paragraph 0011). However, Kinoshita may not disclose broadcasting the fault message to all of the nodes in the network. In the same field of endeavor, Humblet discloses a method for provisioning protection paths in a network (Figure 3) wherein failure notification messages are broadcast to all nodes in a network (column 13, lines 19-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the failure message notification disclosed in Humblet with the working/protection path provisioning disclosed in Kinoshita in order to accelerate implicit failure notification in a network.

11.   **Claims 18 and 29** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita

in view of Chen, as applied to Claims 12 and 23 above, and further in view of Jaber. Kinoshita

and Chen disclose all of the limitations of Claims 12 and 23, as described above. However, the

aforementioned references may not disclose identifying a class of service associated with the

working path and selecting the timing constraint based upon the class of service. In the same

field of endeavor, Jaber teaches class of service capabilities in a transport network, implemented

in priority levels (e.g., guaranteed, best effort). Each priority level has a timing constraint

associated with it (e.g., guaranteed traffic has a defined time delay). Therefore, Jaber teaches

identifying a class of service for a working path in a transport network, and selecting a timing

constraint based upon the class of service (paragraph 0030). It would have been obvious to a

person of ordinary skill in the art at the time the invention was made to combine the class of

service designation taught in Jaber with the working/protection path provisioning disclosed in

Kinoshita, as modified above, in order to send opaque link state advertisements across the

network, thus supporting path selection.

12.   **Claims 21 and 32** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita

in view of Chen, as applied to Claims 12 and 23 above, and further in view of Humblet.

Kinoshita and Chen disclose all of the limitations of Claims 12 and 23, as described above.

Kinoshita further discloses identifying a fault condition at a reporting one of the nodes in the

network and generating a fault message identifying the fault condition (paragraph 0011).

However, the aforementioned references may not disclose broadcasting the fault message to all

of the nodes in the network. In the same field of endeavor, Humblet discloses a method for

provisioning protection paths in a network (Figure 3) wherein failure notification messages are

broadcast to all nodes in a network (column 13, lines 19-30). It would have been obvious to one

of ordinary skill in the art at the time the invention was made to combine the failure message

notification disclosed in Humblet with the working/protection path provisioning disclosed in

Kinoshita, as modified above, in order to accelerate implicit failure notification in a network.

Allowable Subject Matter

13.   **Claims 13-15** objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims. The following is a statement of reasons for the indication of allowable

subject matter: Kinoshita discloses network configuration information comprising topological

information describing the interconnections between the nodes in the network (Figure 28).

However, the prior art may not disclose network configuration information comprising timing

information including data regarding recovery response times for the nodes in the network, as

claimed in Claim 13. Claims 14 and 15 depend on Claim 13.

Response to Arguments

14.   Applicant's arguments, filed March 3, 2008, with respect to rejection of Claims 12-22

under 35 U.S.C. 112, first paragraph have been fully considered and are persuasive. The

rejection of said claims under 35 U.S.C. 112, first paragraph, has been withdrawn.

15.   Applicant's arguments with respect to rejection of Claims 1, 8, 9, 12, 19, 20, 23, 30, and

31 under 35 U.S.C. 102(e) and Claims 2-7, 10, 11, 13-18, 21, 22, 24-29, 32, and 33 have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Chriss whose telephone number is (571)272-1774. The examiner can normally be reached on Monday - Friday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrew Chriss
Examiner
Art Unit 2619

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Examiner, Art Unit 2619

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Supervisory Patent Examiner, Art Unit 2619